

**AMENDMENTS TO THE CLAIMS**

*This listing will replace all prior versions, and listings, of claims in the application:*

1. (Currently amended) A ~~[[P]]~~ pseudo-isothermal chemical reactor ~~(1)~~ for heterogeneous chemical reactions comprising:
  - a substantially cylindrical shell ~~(2)~~ having an axis (Z-Z)~~[[,]]~~;
  - a reaction zone ~~(5)~~ defined in said shell; ~~(2)~~ and
  - at least one heat exchange unit ~~(6)~~, supported in said reaction zone ~~(5)~~ and comprising a plurality of heat exchangers ~~(7)~~, ~~characterized in that~~
    - wherein at least one of said heat exchangers ~~(7)~~ consists of a coil obtained from a single tubular element and ~~has substantially parallelepiped, flattened overall dimensions~~ which extends in a serpentine manner substantially in a plane parallel to said axis (Z-Z) of the shell.
2. (Currently amended) The ~~[[C]]~~ chemical reactor according to claim 1, ~~characterized in that~~ wherein said heat exchanger ~~(7)~~ comprises a plurality of tubular, parallel rectilinear portions ~~(8)~~, connected together head-to-tail by a corresponding plurality of curvilinear fitting portions ~~(9)~~.
3. (Currently amended) The ~~[[C]]~~ chemical reactor according to claim 2, ~~characterized in that~~ wherein said tubular rectilinear portions ~~(8)~~ are of equal length and have coplanar longitudinal axes.
4. (Currently amended) The ~~[[C]]~~ chemical reactor according to claim 3, ~~characterized in that~~ wherein said curvilinear portions ~~(9)~~ are semicircular.
5. (Currently amended) The ~~[[C]]~~ chemical reactor according to claim 3, ~~characterized in that~~ wherein said rectilinear portions ~~(8)~~ of said coil exchangers ~~(7)~~ extend radially in said reaction zone ~~(5)~~.

6. (Currently amended) The ~~[[C]]~~chemical reactor according to claim 3, ~~characterized in that wherein~~ said rectilinear portions (8) of said coil exchangers (7) extend in said reaction zone (5) substantially parallel to the axis (Z-Z) of the shell (2).

7. (Currently amended) The ~~[[C]]~~chemical reactor according to claim 1, ~~characterized in that wherein~~ said heat exchange unit comprising a plurality of said coil heat exchangers (7) has a substantially cylindrical configuration, coaxial and concentric to said reaction zone (5), in which it is supported, ~~in said heat exchange unit (6)~~ the coil heat exchangers (7) being arranged radially in said heat exchange unit.

8. (Currently amended) The ~~[[C]]~~chemical reactor according to claim 7, ~~characterized in that wherein~~ ~~in said heat exchange unit (6)~~, the coil heat exchangers (7) are arranged radially in said heat exchange unit in many coaxial and concentric arrangements.

9. (Currently amended) The ~~[[C]]~~chemical reactor according to ~~any one of the previous claim[[s]] 1, characterized in that,~~ wherein at least one of said coil heat exchangers (7) comprises an additional duct (18) supplying operating heat exchange fluid, associated with the exchanger itself in a predetermined intermediate position of the respective coil.

10. (Currently amended) The ~~[[C]]~~chemical reactor according to claim 3, ~~characterized in that wherein~~ said rectilinear portions (8) of said coil exchangers (7) extend parallel to a diameter of the shell (2).

11. (Currently amended) The ~~[[C]]~~chemical reactor according to claim 10, ~~characterized in that wherein~~ said coil exchangers (7) are arranged on imaginary equidistant parallel planes.

12. (Currently amended) The ~~[[C]]~~chemical reactor according to claim 11, ~~characterized in that wherein~~ said curvilinear fitting portions (9) are tangent to imaginary cylindrical surfaces (22,23, 24,25, 26,27) having a radius equal to the inner radius of the shell (2) and centres all arranged on the same diameter (~~D1~~) of the shell (2).